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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,869	06/26/2003	Hideki Akiyama	86672PRC	5506

7590 03/08/2007
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EXAMINER

MADDEN, GREGORY VINCENT

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/606,869

Applicant(s)

AKIYAMA ET AL.

Examiner

Gregory V. Madden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed December 4, 2006 have been fully considered but they are not persuasive.

Regarding independent claims 1 and 10, Applicant has amended the claims “...to clarify that the compressed first and subsequent image frames are respective first and subsequent frames of a compressed version of the motion image sequence” (See Remarks, Pg. 8). In Pg. 9 of the Remarks, Applicant argues that “...the MPEG4 encoder 201 of Konishi operates on the first frame as well as subsequent frames of a motion image sequence, and the resulting compressed version of the motion image sequence will include a compressed first image frame. However, that compressed first image frame will apparently be compressed at the same rate as the subsequent image frames of the motion image sequence...”. Applicant further argues that the DCF file (index first frame) is not part of the actual compressed motion image sequence. Considering these arguments, the Examiner respectfully disagrees. First, in regard to the Applicant's contention that the compressed first image frame will be compressed at the same rate as subsequent image frames of the motion image sequence, the Examiner notes that MPEG-4 encoding inherently compresses the first frame (i.e. an I-frame) at a different rate than subsequent image frames (P or B-frames), as is noted by the Applicant's disclosure (Pg. 7, Lines 20-31). It is well known in the art that the I-frame is compressed as a still image frame using JPEG-type compression, while subsequent frames are compressed at a lower rate. Thus, the Examiner believes that the Konishi reference does teach that the first image frame is compressed and stored using a first target data rate (I-frame of the MPEG-4 compression), wherein the first frame is a compressed version of the first frame of the motion image sequence in a motion video image file (ASF file shown in Fig. 24). Further, the Examiner believes that the index file (DCF file) is part of the actual compressed motion image sequence, as Fig. 25 of

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Konishi shows that the first frame (index a, index b, etc.) of the motion image sequence (motion video shooting) is saved as both a motion image frame and an index still frame. As noted above, the first frame is compressed as an I-frame in MPEG-4 compression, which is equivalent to the compressed index image stored in the index file (DCF file) of the ASF, as shown in Fig. 24. Therefore, the first motion image frame (I-frame), which is equivalent to the index frame, is indeed part of the actual compressed motion image sequence, as is again shown in Fig. 25. For the above reasons, the Examiner believes that the Konishi reference can still be considered prior art over claims 1 and 10, and thus the rejection to these newly amended claims is maintained.

As for dependent claims 2-9 and 11-17, Applicant contends that the claims are allowable in view of the arguments pertaining to claims 1 and 10. However, as stated above, the rejections to claims 1 and 10 have been maintained, and thus the rejections to claims 2-9 and 11-17 are similarly maintained. Please refer to the rejections set forth below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, 9-12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Konishi et al. (U.S. Pub. 2002/0003576).

First, regarding **claim 1**, the Konishi reference teaches a method for producing a motion video image file from a motion image sequence, comprising the steps of providing a first target data rate for a first image frame of the motion image sequence (start frame index a, index b, etc.), compressing the first

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image frame using the first target data rate (I-frame rate) and storing the first image frame, as a first frame of a compressed version of the motion image sequence (shown in Fig. 25), in a motion video image file (DCF file within ASF file). Further, Konishi teaches providing a second target data rate for subsequent frames (P and/or B frames in MPEG-4 encoding) of the motion video sequence, the second target data rate being lower than the first target data rate. Also, Konishi teaches that the subsequent image frames of the motion image sequence are compressed using the second target data rate (rate of P and/or B frame compression), the subsequent image frames in the motion video image file are stored (in memory 121 or PCMCIA card 122) as subsequent frames of the compressed version of the motion image sequence. Finally, Konishi shows that the first image frame is further decompressed, and the decompressed first image frame (index a, index b, etc.) is used to provide a still image representative of the motion image file (the first image frame being displayed as an index image on the display), wherein upon selection of the motion video image file for playback (Video File A, Video File B, etc., shown in Fig. 26b), the compressed first and subsequent image frames are decompressed and utilized to provide playback of the respective first and subsequent image frames of the motion image sequence. Please refer to Figs. 23-27 and Paras. [0126-0132].

As for **claim 2**, the limitations of claim 1 are taught above, and Konishi further discloses in Para. [0130] that the still image (index image) is used to represent the motion image sequence in an image navigation display to enable user selection of the corresponding motion video image file. See also Fig. 26B.

Considering **claim 3**, Konishi teaches the limitations of claim 2 above, and again Fig. 26B and Para. [0130] teach that the image navigation display includes a plurality of still images (thumbnails) corresponding to a plurality of motion video image files.

In regard to **claim 4**, Konishi discloses the limitations of claim 3, and the Konishi reference also teaches in Para. [0128] that the plurality of still images on the image navigation display (shown in Fig.

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26B) correspond to a plurality of still image files. Note that the thumbnail images on the display correspond to a higher resolution main image stored in a still video file.

Regarding **claim 6**, again Konishi teaches the limitations of claim 1 above, and Konishi discloses that the method includes a step of capturing the motion image sequence in Para. [0126].

As for **claim 7**, the limitations of claim 6 are taught above, and Konishi also teaches that the method includes the step of capturing a plurality of still images (or index images) and storing each of the still images in a still image file (DCF file). Please refer to Para. [0127].

Considering **claim 9**, the limitations of claim 1 are taught above by the Konishi reference, and Konishi discloses that the motion video image file is an MPEG file (MPEG4) in Para. [0132] and Fig. 23.

Next, in regard to **claim 10**, the Konishi reference discloses a digital camera (11) for capturing a motion image sequence and producing a motion video image file from the motion image sequence comprising an image sensor (CCD 112) for capturing a motion image sequence having a plurality of image frames, a processor (115) for compressing the motion image sequence, wherein the processor compresses a first image frame of the motion image sequence using a first target data rate and compresses subsequent image frames of the motion image sequence using a second target data rate, the second target data rate being lower than the first target data rate, and a memory (PCMCIA 122) for storing the compressed motion image sequence, wherein the compressed first image frame and compressed subsequent image frames are stored in a motion video image file, and wherein upon selection of the motion video image file for playback (Video File A, Video File B, etc., shown in Fig. 26b), the compressed first and subsequent image frames are decompressed and utilized to provide playback of the respective first and subsequent image frames of the motion image sequence. See Figs. 1 and 23-27, Paras. [0057-0058], Para. [0062], and Paras. [0126-0132].

As for **claim 11**, Konishi teaches the limitations of claim 10 above, and Konishi further teaches that the digital camera (11) includes a display (LCD 120), wherein the processor (115) further

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decompresses the first image frame of the motion image sequence to provide a still image representative of the motion video image file, and the display displays the still image. See Figs. 1 and 26A, Para. [0060], and Para. [0130].

Regarding **claim 12**, the limitations of claim 10 are taught above, and Konishi discloses that the memory (122) is a removable memory card in Fig. 1 and Para. [0062].

Considering **claim 17**, again the limitations of claim 10 are shown above, and as is similarly disclosed in regard to claim 9 above, Konishi discloses that the motion video image file is an MPEG file (MPEG4) in Para. [0132] and Fig. 23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (U.S. Pub. 2002/0003576).

Regarding **claims 8 and 16**, the limitations of claims 1 and 10 are taught above, respectively, but the Konishi reference only discloses that the motion image file is an MPEG file, not that it can be a motion JPEG file. However, Official Notice is taken that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have compressed the motion image file as a motion JPEG file as opposed to an MPEG file. One would have been motivated to do so because it is well known that motion JPEG files allow for simple video editing, as frames of the video do not interact with each other in any way (as MPEG formats do). Thus, a higher quality video can be obtained with editing.

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As the Applicant did not traverse the above Official Notice taken in the previous office action, it will be considered an admission that the limitations of the claims would have been well-known to one of ordinary skill in the art at the time of the invention.

Claims 5 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (U.S. Pub. 2002/0003576) in view of Suzuki et al. (U.S. Pat. 6,018,362).

Next, considering **claim 5**, the Konishi reference teaches all of the limitations of claim 1 above, but the reference does not specifically disclose that the target data rates are provided using a first quantization table (for the first target data rate) and a second quantization table (for the second target data rate). However, the Suzuki reference teaches in Col. 5, Lines 26-38 that is well known in the art to use different quantization tables to adjust the compression ratios for digital image data, therefore allowing different levels of compression. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the various quantization tables for each compression level, as done by Suzuki, with the compression processing of Konishi. One would have been motivated to do so because by using a plurality of quantization tables, the compression level for a still image to be displayed can be lowered, thereby allowing a higher-resolution image to be displayed, while a motion image can be compressed at higher ratio, as high-resolution is not generally a priority in motion image capture.

As for **claim 13**, the limitations of claim 10 are taught above by the Konishi reference, but as is similarly shown above with respect to claim 5, the reference does not specifically disclose that the target data rates are provided using a first quantization table (for the first target data rate) and a second quantization table (for the second target data rate). However, the Suzuki reference teaches in Col. 5, Lines 26-38 that is well known in the art to use different quantization tables to adjust the compression ratios for digital image data, therefore allowing different levels of compression.

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In regard to **claim 14**, the limitations of claim 13 are taught above, and the Suzuki reference further discloses that the quantization tables are stored in a firmware memory (in compression processing section 29) in the digital camera. Again, please see Col. 5, Lines 26-38.

Finally, considering **claim 15**, Konishi in view of Suzuki teaches the limitations of claim 14 above, and again the Konishi reference discloses that the digital camera captures and compresses still images (See Paras. [0127-0128]). Again, as disclosed above, the Konishi reference does not teach that a plurality of quantization tables are used to compress the different images, and therefore does not specifically teach that a third quantization table is used to compress the still images. However, the Suzuki reference discloses the use of a plurality of quantization tables stored in a firmware memory (29) to designate various compression ratios (See Col. 5, Lines 26-38). Thus, a third quantization table can be chosen to compress the still images, which are compressed using a low compression ratio as compared to the motion images and displayed first frame image.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Obrador (U.S. Pat. 6,992,707): Col. 5, Lines 40-54

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory V. Madden whose telephone number is 571-272-8128. The examiner can normally be reached on Mon.-Fri. 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Madden
February 21, 2007


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER